



Vibrobots

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TOOLS:

- [Hammer \(1\)](#)
- [Hot glue gun \(1\)](#)
- [Phillips screwdriver \(1\)](#)
- [Soldering iron \(1\)](#)
- [Wire cutter/stripper \(1\)](#)

PARTS:

- [Metal candy mint tin \(1\)](#)
- [Wire Coat Hanger \(1\)](#)
- [Motor \(1\)](#)
From a battery powered toy
- [Metal Washer \(4\)](#)
Small
- [Nuts & Bolts \(2\)](#)
Small
- [insulated wrapping wire \(1'\)](#)
- [Paper clip \(1\)](#)
- [Plastic Washer \(3\)](#)
- [AA Battery \(1\)](#)
- [Cable Tie \(1\)](#)

SUMMARY

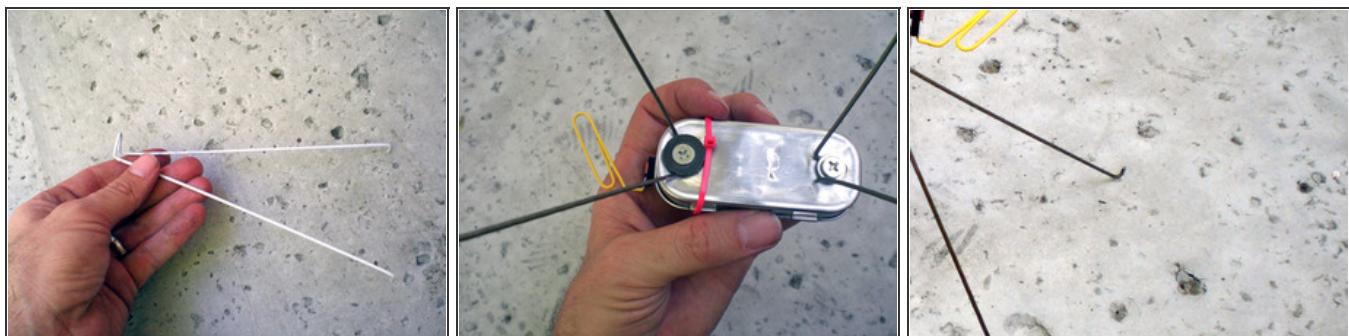
When my 3-year-old daughter dropped the \$1 battery-powered fan I bought her, the plastic case cracked, ruining it. I promised her I'd make something even better using the fan's motor. I'm a fan of Chico Bicalho's wonderful windup toys, so I made a robot inspired by his designs. I call mine the Vibrobot, and you can make one in a couple of hours or less.

Step 1 — Prepare the candy tin.



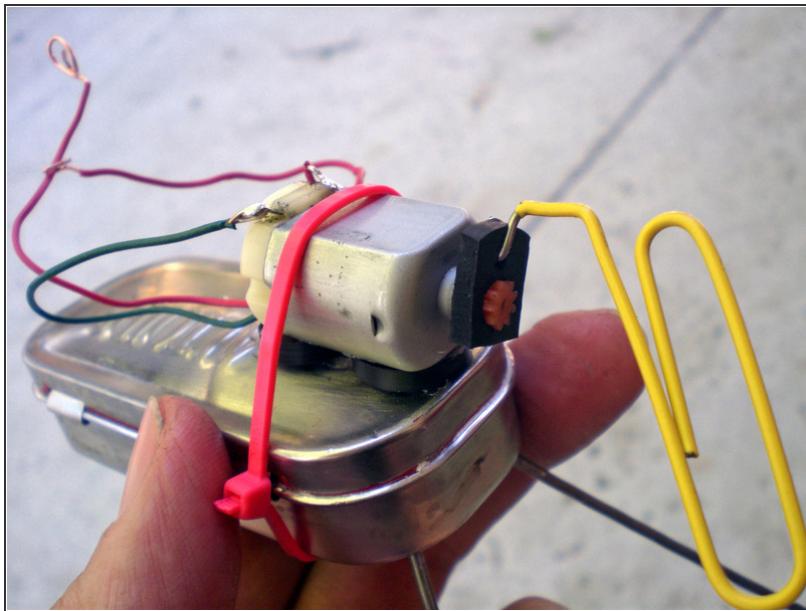
- Sand the paint off the tin, if you wish.
- Punch 2 holes through the bottom of the tin, one on either end, using a hammer and a Phillips screwdriver. You'll use these holes to attach the legs.
- Punch a hole through the lid near one end. This hole is for routing the wires.

Step 2 — Make the legs.



- Snip off 2 long pieces of wire from a coat hanger and bend each into a V-shape.
- Bend the tip of the V into a right angle, and then bend a little “foot” at each end.
- Attach the legs to the holes in the tin using bolts, nuts, and metal washers.
- Add a dollop of hot glue to each foot to give them rubber tips.

Step 3 — Install the motor.



- Push a paper clip through one of the plastic flat washers, and attach the washer to the spindle of the motor.
- Solder 2 wires to the 1.5V battery, insert the battery in the candy tin, and thread both wires through the hole in the lid.
- Solder one wire to a lead on the motor, and solder a third loose wire to the other motor lead.
- Put 2 plastic flat washers between the motor and the candy tin, and secure the motor to the tin using a cable tie.

Step 4 — Operate.



- To operate the Vibrobot, twist the loose battery wire and the loose motor wire together (you can also solder an alligator clip to one of the wires for a switch).
- Experiment with the critter by gently bending the paper clip and legs into different shapes and observing the effects.
- Watch a video at http://www.makezine.com/10/123_vibrobot.

This project originally appeared in [MAKE Volume 10](#).

Related Posts on Make: Online:

Classroom Vibrobots

<http://blog.makezine.com/archive/2009/09...>

How-to: BEAM Vibrobots

<http://blog.makezine.com/archive/2009/07...>

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